

## RAW SEQUENCE LISTING

DATE: 04/06/2001

PATENT APPLICATION: US/09/467,160

TIME: 15:03:42

#10

Input Set : N:\Crf3\RULE60\09467160.txt

Output Set: N:\CRF3\04062001\I467160.raw

## SEQUENCE LISTING

## 4 (1) GENERAL INFORMATION:

6 (i) APPLICANT: Pelus, Louis M

7 Bhatnagar, Pradip K

8 King, Andrew G

9 Balcarek, Joanna M

11 (ii) TITLE OF INVENTION: Methods of Enhancing Bioactivity of

12 Chemokines

14 (iii) NUMBER OF SEQUENCES: 29

16 (iv) CORRESPONDENCE ADDRESS:

17 (A) ADDRESSEE: SmithKline Beecham Corporation -

18 Corporate Patents

19 (B) STREET: 709 Swedeland Road

20 (C) CITY: King of Prussia

21 (D) STATE: PA

22 (E) COUNTRY: USA

23 (F) ZIP: 19406-2799

25 (v) COMPUTER READABLE FORM:

26 (A) MEDIUM TYPE: Floppy disk

27 (B) COMPUTER: IBM PC compatible

28 (C) OPERATING SYSTEM: PC-DOS/MS-DOS

29 (D) SOFTWARE: PatentIn Release #1.0, Version #1.25

31 (vi) CURRENT APPLICATION DATA:

C--&gt; 32 (A) APPLICATION NUMBER: US/09/467,160

C--&gt; 33 (B) FILING DATE: 20-Dec-1999

34 (C) CLASSIFICATION:

36 (vii) PRIOR APPLICATION DATA:

37 (A) APPLICATION NUMBER: 08/557,142

38 (B) FILING DATE:

40 (viii) ATTORNEY/AGENT INFORMATION:

41 (A) NAME: Hall, Linda E.

42 (B) REGISTRATION NUMBER: 31,763

43 (C) REFERENCE/DOCKET NUMBER: SBCP50161

45 (ix) TELECOMMUNICATION INFORMATION:

46 (A) TELEPHONE: 215-270-5015

47 (B) TELEFAX: 215-270-5090

50 (2) INFORMATION FOR SEQ ID NO: 1:

52 (i) SEQUENCE CHARACTERISTICS:

53 (A) LENGTH: 72 amino acids

54 (B) TYPE: amino acid

55 (D) TOPOLOGY: unknown

57 (ii) MOLECULE TYPE: protein

61 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 1:

63 Ala Pro Ile Ala Asn Glu Leu Arg Cys Gln Cys Leu Gln Thr Met Ala

64 1 5 10 15

67 Gly Ile His Leu Lys Asn Ile Gln Ser Leu Lys Val Leu Pro Ser Gly

68 20 25 30

ENTERED

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```

71   Pro His Cys Thr Gln Thr Glu Val Ile Ala Thr Leu Lys Asn Gly Arg
72       35                               40                               45
75   Glu Ala Cys Leu Asp Pro Glu Ala Pro Leu Val Gln Lys Ile Val Gln
76       50                               55                               60
79   Lys Met Leu Lys Gly Val Pro Lys
80       65                               70
82 (2) INFORMATION FOR SEQ ID NO: 2:
84   (i) SEQUENCE CHARACTERISTICS:
85       (A) LENGTH: 73 amino acids
86       (B) TYPE: amino acid
87       (D) TOPOLOGY: unknown
89   (ii) MOLECULE TYPE: protein
93   (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 2:
95   Ala Ser Val Ala Thr Glu Leu Arg Cys Gln Cys Leu Gln Thr Leu Gln
96   1           5           10           15
99   Gly Ile His Pro Lys Asn Ile Gln Ser Val Asn Val Lys Ser Pro Gly
100       20           25           30
103  Pro His Cys Ala Gln Thr Glu Val Ile Ala Thr Leu Lys Asn Gly Arg
104       35           40           45
107  Lys Ala Cys Leu Asn Pro Ala Ser Pro Ile Val Lys Lys Ile Ile Glu
108       50           55           60
111  Lys Met Leu Asn Ser Asp Lys Ser Asn
112       65           70
114 (2) INFORMATION FOR SEQ ID NO: 3:
116   (i) SEQUENCE CHARACTERISTICS:
117       (A) LENGTH: 73 amino acids
118       (B) TYPE: amino acid
119       (D) TOPOLOGY: unknown
121   (ii) MOLECULE TYPE: protein
125   (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3:
127  Ala Pro Leu Ala Thr Glu Leu Arg Cys Gln Cys Leu Gln Thr Leu Gln
128  1           5           10           15
131  Gly Ile His Leu Lys Asn Ile Gln Ser Val Lys Val Lys Ser Pro Gly
132       20           25           30
135  Pro His Cys Ala Gln Thr Glu Val Ile Ala Thr Leu Lys Asn Gly Gln
136       35           40           45
139  Lys Ala Cys Leu Asn Pro Ala Ser Pro Met Val Lys Lys Ile Ile Glu
140       50           55           60
143  Lys Met Leu Lys Asn Gly Lys Ser Asn
144       65           70
146 (2) INFORMATION FOR SEQ ID NO: 4:
148   (i) SEQUENCE CHARACTERISTICS:
149       (A) LENGTH: 73 amino acids
150       (B) TYPE: amino acid
151       (D) TOPOLOGY: unknown
153   (ii) MOLECULE TYPE: protein
157   (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4:
159  Ala Ser Val Val Thr Glu Leu Arg Cys Gln Cys Leu Gln Thr Leu Gln
160  1           5           10           15

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```

163 Gly Ile His Leu Lys Asn Ile Gln Ser Val Asn Val Arg Ser Pro Gly
164           20           25           30
167 Pro His Cys Ala Gln Thr Glu Val Ile Ala Thr Leu Lys Asn Gly Lys
168           35           40           45
171 Lys Ala Cys Leu Asn Pro Ala Ser Pro Met Val Gln Lys Ile Ile Glu
172           50           55           60
175 Lys Ile Leu Asn Lys Gly Ser Thr Asn
176           65           70

```

178 (2) INFORMATION FOR SEQ ID NO: 5:

180 (i) SEQUENCE CHARACTERISTICS:

181 (A) LENGTH: 5 amino acids

182 (B) TYPE: amino acid

183 (C) STRANDEDNESS: unknown

184 (D) TOPOLOGY: unknown

186 (ii) MOLECULE TYPE: peptide

189 (ix) FEATURE:

190 (A) NAME/KEY: Modified-site

191 (B) LOCATION: 3..5

192 (D) OTHER INFORMATION: /note= "Asp bonds to NH, Lys

193 bonds

194 to CO, both NH and CO bond to CH which bonds to

195 (CH<sub>2</sub>)<sub>4</sub> which bonds to mirror image of peptide."

197 (ix) FEATURE:

198 (A) NAME/KEY: Modified-site

199 (B) LOCATION: 3..5

200 (D) OTHER INFORMATION: /note= "Xaa in position 4 is

201 diaminosuberic acid."

203 (ix) FEATURE:

204 (A) NAME/KEY: Modified-site

205 (B) LOCATION: 1..2

206 (D) OTHER INFORMATION: /note= "Xaa in position 1 is

207 pyroglutamic acid."

210 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 5:

W--&gt; 212 Xaa Glu Asp Xaa Lys

213 1 5

215 (2) INFORMATION FOR SEQ ID NO: 6:

217 (i) SEQUENCE CHARACTERISTICS:

218 (A) LENGTH: 5 amino acids

219 (B) TYPE: amino acid

220 (D) TOPOLOGY: unknown

222 (ii) MOLECULE TYPE: protein

225 (ix) FEATURE:

226 (A) NAME/KEY: Modified-site

227 (B) LOCATION: 1..2

228 (D) OTHER INFORMATION: /note= "Xaa in position 1 is

229 pyroglutamic acid."

231 (ix) FEATURE:

232 (A) NAME/KEY: Modified-site

233 (B) LOCATION: 3..5

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Input Set : N:\Crf3\RULE60\09467160.txt

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234 (D) OTHER INFORMATION: /note= "Asp bonds to NH, Lys  
 235 bonds  
 236 to CO, both NH and CO bond to CH which bonds to  
 237 (CH2)2 which bonds to mirror image of peptide."  
 239 (ix) FEATURE:  
 240 (A) NAME/KEY: Modified-site  
 241 (B) LOCATION: 3..5  
 242 (D) OTHER INFORMATION: /note= "Xaa in position 4 is  
 243 diaminoadipic acid."  
 246 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 6:  
 W--> 248 Xaa Glu Asp Xaa Lys  
 249 1 5  
 251 (2) INFORMATION FOR SEQ ID NO: 7:  
 253 (i) SEQUENCE CHARACTERISTICS:  
 254 (A) LENGTH: 5 amino acids  
 255 (B) TYPE: amino acid  
 256 (C) STRANDEDNESS: unknown  
 257 (D) TOPOLOGY: unknown  
 259 (ii) MOLECULE TYPE: peptide  
 262 (ix) FEATURE:  
 263 (A) NAME/KEY: Modified-site  
 264 (B) LOCATION: 3..5  
 265 (D) OTHER INFORMATION: /note= "Glu bonds to NH, Lys  
 266 bonds  
 267 to CO, both NH and CO bond to CH which bonds to  
 268 (CH2)4 which bonds to mirror image of peptide."  
 270 (ix) FEATURE:  
 271 (A) NAME/KEY: Modified-site  
 272 (B) LOCATION: 3..5  
 273 (D) OTHER INFORMATION: /note= "Xaa in position 4 is  
 274 diaminosuberic acid."  
 276 (ix) FEATURE:  
 277 (A) NAME/KEY: Modified-site  
 278 (B) LOCATION: 1..2  
 279 (D) OTHER INFORMATION: /note= "Xaa in position 1 is  
 280 pyroglutamic acid"  
 283 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 7:  
 W--> 285 Xaa Glu Glu Xaa Lys  
 286 1 5  
 288 (2) INFORMATION FOR SEQ ID NO: 8:  
 290 (i) SEQUENCE CHARACTERISTICS:  
 291 (A) LENGTH: 5 amino acids  
 292 (B) TYPE: amino acid  
 293 (C) STRANDEDNESS: unknown  
 294 (D) TOPOLOGY: unknown  
 296 (ii) MOLECULE TYPE: peptide  
 299 (ix) FEATURE:  
 300 (A) NAME/KEY: Modified-site  
 301 (B) LOCATION: 3..5

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Input Set : N:\Crf3\RULE60\09467160.txt

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```

302      (D) OTHER INFORMATION: /note= "Asp bonds to NH, Lys
303 bonds
304 to CO, both NH and CO bond to CH which bonds
305 (CH2)4 which bonds to mirror image peptide."
307      (ix) FEATURE:
308          (A) NAME/KEY: Modified-site
309          (B) LOCATION: 3..5
310      (D) OTHER INFORMATION: /note= "Xaa in position 4 is
311 diaminosuberic acid."
313      (ix) FEATURE:
314          (A) NAME/KEY: Modified-site
315          (B) LOCATION: 1..2
316      (D) OTHER INFORMATION: /note= "Xaa in position 1 is
317 pyroglutamic acid."
320      (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 8:
W--> 322      Xaa Asp Asp Xaa Lys
323          1      5
325 (2) INFORMATION FOR SEQ ID NO: 9:
327      (i) SEQUENCE CHARACTERISTICS:
328          (A) LENGTH: 5 amino acids
329          (B) TYPE: amino acid
330          (C) STRANDEDNESS: unknown
331          (D) TOPOLOGY: unknown
333      (ii) MOLECULE TYPE: peptide
336      (ix) FEATURE:
337          (A) NAME/KEY: Modified-site
338          (B) LOCATION: 1..3
339      (D) OTHER INFORMATION: /note= "Xaa in position 1 is
340 picolinic acid (Pic)."
342      (ix) FEATURE:
343          (A) NAME/KEY: Modified-site
344          (B) LOCATION: 3..5
345      (D) OTHER INFORMATION: /note= "Asp bonds to NH, Lys
346 bonds
347 to CO, both NH and CO bond to CH which bonds to
348 (CH2)4 which bonds to mirror image peptide."
350      (ix) FEATURE:
351          (A) NAME/KEY: Modified-site
352          (B) LOCATION: 3..5
353      (D) OTHER INFORMATION: /note= "Xaa in position 4 is
354 diaminosuberic acid."
357      (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 9:
W--> 359      Xaa Glu Asp Xaa Lys
360          1      5
362 (2) INFORMATION FOR SEQ ID NO: 10:
364      (i) SEQUENCE CHARACTERISTICS:
365          (A) LENGTH: 5 amino acids
366          (B) TYPE: amino acid
367          (C) STRANDEDNESS: unknown

```

VERIFICATION SUMMARY  
PATENT APPLICATION: US/09/467,160

DATE: 04/06/2001  
TIME: 15:03:43

Input Set : N:\Crf3\RULE60\09467160.txt  
Output Set: N:\CRF3\04062001\I467160.raw

L:32 M:220 C: Keyword misspelled or invalid format, [(A) APPLICATION NUMBER:]  
L:33 M:220 C: Keyword misspelled or invalid format, [(B) FILING DATE:]  
L:212 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:5  
L:248 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:6  
L:285 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:7  
L:322 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:8  
L:359 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:9  
L:396 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:10  
L:433 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:11  
L:470 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:12  
L:514 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:13  
L:551 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:14  
L:595 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:15  
L:632 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:16  
L:669 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:17  
L:713 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:18  
L:757 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:19  
L:795 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:20  
L:825 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:21  
L:868 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:22  
L:899 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:23  
L:937 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:24  
L:975 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:25  
L:1011 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:26  
L:1041 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:27  
L:1077 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:28  
L:1118 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:29